

MAP4C 2015

Name _____

PRACTICE DATA Quiz #1

Overall Expectation	Level Achieved
D2 - demonstrate an understanding of the applications of data management used by the media and the advertising industry and in various occupations.	

- A) Given the following data, find the mean, median, mode, range, quartiles and 55th percentile.

13, 14, 15, 16, 6, 7, 13, 15, 16, 18, 19, 21

ordered: 6, 7, 13, 13, 14, 15, 15, 16, 16, 18, 19, 21

range: highest - lowest
 $= 21 - 6$
 $= 15$

median: $\frac{15 + 15}{2} = 15$ (Q₂)

mode: most frequent
 13, 15, 16

Q₁: 6, 7, 13, 13, 14

Q₃: 16, 16, 18, 19, 21

mean: $\frac{173}{12}$
 $= 14.4$

55th %ile

$0.55 \times 12 = 6.6 \Rightarrow 7^{\text{th}}$ position

15

What could the median represent in a situation outside of school?

- 2nd quarter in business
- middle shoe size

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B) Given the following data, calculate the standard deviation and variance.
3, 4, 5, 6, 8, 9

$$\bar{x} = \frac{3+4+5+6+8+9}{6}$$

$$= 5.8$$

x	$x - \bar{x}$	$(x - \bar{x})^2$
3	$3 - 5.8 = -2.8$	$(-2.8)^2 = 7.84$
4	$4 - 5.8 = -1.8$	$(-1.8)^2 = 3.24$
5	$5 - 5.8 = -0.8$	$(-0.8)^2 = 0.64$
6	$6 - 5.8 = 0.2$	0.04
8	$8 - 5.8 = 2.2$	4.84
9	$9 - 5.8 = 3.2$	10.24

$$\sigma^2 \text{ Variance: } \frac{26.84}{6} = 4.47$$

$$\sigma \text{ S.D. } \sqrt{4.47} = 2.11$$

What could variance be used for outside of school?

